REMARKS

This Amendment is in response to the Office Action dated September 16, 2004, in which claims 1 and 2 were initially rejected. Applicants respectfully request reconsideration and allowance of all pending claims in view of the above-amendments and the following remarks.

I. CLAIM REJECTIONS UNDER §112

Claims 1 and 2 were rejected under §112, second paragraph, as being indefinite.

With this Amendment, claims 1 and 2 are cancelled and are replaced with new claims 3 and 4. New claims 3 and 4 are written to clarify the objections raised in the Office Action. New claims 3 and 4 correspond to original claims 1 and 2, in that new claim 3 effectively defines a transmitter and new claim 4 effectively defines a receiver. In each of the new claims, the language has been amended to clarify the matters to which the Examiner has objected. It has now been made clear that the super-toroidal conductor in each case has a conductor length ℓ. It is also made clear that the signal generator produces electrical signals having at least one frequency component not less than $2c/\ell$ where c is the speed of light.

With these changes, Applicants respectfully request that the objection to the claims be withdrawn.

II. CLAIM REJECTIONS UNDER §103

Claims 1 and 2 were rejected under §103(a) as being unpatentable over Vaiser et al., WO 95/03850. Vaiser et al. talks of transmitter and receiver aerials. However, in fact, a closer inspection of Vaiser et al. will show that this application is not concerned with the transmission of information by radiated electrical magnetic fields between remotely spaced locations. In fact Vaiser et al. is not concerned with the transmitting of information as such, but asserts that his super-toroidal windings can be used in various combinations to cause

desired effects in stimulated bodies. Importantly, he is concerned only with a system where both his so-called transmitter and his so-called receiver are together connected to the same system control unit. The Examiner is directed to the sentence on page 10 of Vaiser et al., lines 5 and 6 which states:

"A systems control unit is connected both to the receiver system and the transmitter system."

New claim 3 herewith is clearly confined to apparatus for transmitting information by means of radiated electromagnetic fields, for reception by a receiver at a remote location. New claim 4 is clearly limited to apparatus for receiving information transmitted by means of radiated electromagnetic fields from a distant transmitter. The transmitting and receiving apparatuses claimed are quite different from the so-called transmitter and receiver systems described in Vasier et al. which must both be connected to a common systems control unit. This is not surprising as the application in Vaiser et al. is different and is not concerned with the transmission of information from one point to another point at a remote location.

Importantly also, Vaiser et al. provides no sensible teaching about the frequencies to be used for energizing the super-toroidal conductors. The range of frequencies disclosed on page 4, lines 26 to 32 (to which the Examiner has referred) encompass practically the full range of possible frequencies.

By comparison, new claims 3 and 4 now clearly state that the super-torodial conductor of the transmitting apparatus should be energized with a frequency component not less than twice the speed of light divided by the conductor length of the super-torodial conductor. This limitation is significant. Prior art torodial antennas referred to in the introduction of the application must be driven at a frequency so that the current in all parts of the toroidal winding around the torus are substantially in phase. This then produces a continuous closed,

in phase magnetic field around the torus of the winding. The torodial magnetic field in turn produces a dipole electric field perpendicular to the torodial plane of the winding, through the center of the torus.

The present application claims energizing the toroidal antenna at a frequency, relative to the conductor length of the toroidal conductor, at which it is not possible for the current in all parts of the super-toroidal conductor to be in phase. As stated in the claim, the defined frequency of the required frequency component is substantially above frequencies at which the current at all segments of the super-toroidal conductor can be in phase.

This feature of the invention is fully explained on page 5 of the specification lines 30 to 32.

The frequency regime for the claimed apparatus is therefore counter-intuitive. However, it has been found that such an arrangement provides considerable advantages, in terms of the omnidirectional and wide-band nature of the apparatus.

In summary, Vaiser et al. does not teach super-torodial conductors for transmitting information from one location for reception by a receiver at a different remote location. Furthermore Vaiser gives no useful teaching of the claimed frequency regime relative to the conductor length of the toroidal antenna.

Therefore, claims 3 and 4 are non-obvious view of the Vasier et al. patent. Applicants respectfully request consideration and allowance of new claims 3 and 4.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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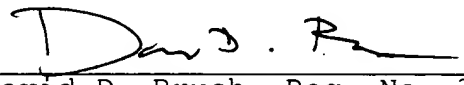
By: 

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